

## Asst. Prof. ESRA ÖZTÜRK

### Personal Information

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### International Researcher IDs

ORCID: 0000-0001-7463-088X

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### Education Information

Doctorate, Erciyes University, Fen Bilimleri Enstitüsü, Fizik (Dr), Turkey 2009 - 2016

Postgraduate, Kocaeli University, Fen Bilimleri Enstitüsü, Fizik (YI), Turkey 2005 - 2008

Undergraduate, Kocaeli University, Fen-Edebiyat Fakültesi, Fizik Bölümü, Turkey 2001 - 2005

### Foreign Languages

English, C1 Advanced

### Research Areas

Physics, Condensed Matter 1: Structural, Mechanical and Thermal Properties, Intensive Article 2: Electronic Structure, Electric, Magnetic and Optical Properties, Natural Sciences

### Academic Titles / Tasks

Assistant Professor, Kocaeli University, Fen Edebiyat Fakültesi, Fizik, 2022 - Continues

Research Assistant PhD, Kocaeli University, Fen Edebiyat Fakültesi, Fizik, 2015 - 2022

Research Assistant, Kocaeli University, Fen Bilimleri Enstitüsü, Fen Bilimleri Enstitüsü, 2010 - 2015

### Academic and Administrative Experience

Deputy Head of Department, Kocaeli University, Fen Edebiyat Fakültesi, Fizik, 2022 - Continues

### Courses

Materyallerin Elektriksel Özellikleri, Postgraduate, 2022 - 2023

Fizik II, Undergraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019

Fizik II, Undergraduate, 2022 - 2023, 2019 - 2020

Mekanik Laboratuvarı, Undergraduate, 2023 - 2024, 2022 - 2023, 2020 - 2021, 2019 - 2020, 2018 - 2019

Fizik I, Undergraduate, 2023 - 2024

Fizik I, Undergraduate, 2023 - 2024, 2022 - 2023

Öğretmenlik Uygulaması, Undergraduate, 2023 - 2024

Elektrik ve Manyetizma Laboratuvarı, Undergraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020

Kathal Fiziği I, Undergraduate, 2023 - 2024

Fizik I, Undergraduate, 2020 - 2021

Fizik I, Undergraduate, 2020 - 2021

Mesleki İngilizce I, Undergraduate, 2020 - 2021

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Investigation of Microstructure, Microhardness and Thermal Properties of Ag-In Intermetallic Alloys Prepared by Vacuum Arc Meltings**  
Çelik E., Ata Esener P., ÖZTÜRK E., Aksöz S.  
Journal Wuhan University of Technology, Materials Science Edition, vol.39, no.1, pp.182-187, 2024 (SCI-Expanded)
- II. **Effect of Minor Sb Additions on Thermal Properties, Microstructure and Microhardness of Sn-Ag-Cu High-Temperature Solder Alloys**  
Aksöz S., Öcal F., Ata Esener P., Öztürk E., Maraşlı N.  
PHYSICS OF METALS AND METALLOGRAPHY, vol.124, no.13, pp.1547-1554, 2023 (SCI-Expanded)
- III. **Effects of Bi content on thermal, microstructure and mechanical properties of Sn-Bi-In-Zn solder alloy systems**  
AKSÖZ S., Esener P. A., ÖZTÜRK E., Marasli N.  
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.33, no.1, pp.11-26, 2022 (SCI-Expanded)
- IV. **Electrical and thermal conductivity and phonon contribution to the thermal conductivity in the Bi-In System**  
Ata Esener P., Bayram Ü., Öztürk E., Aksöz S., Maraşlı N.  
Isi Bilimi Ve Teknigi Dergisi-Journal Of Thermal Science And Technology, vol.40, no.2, pp.371-382, 2020 (SCI-Expanded)
- V. **The variations of electron and phonon contributions to the thermal conductivity with temperature in the Sn-Bi-In-Zn alternative lead-free solder alloys**  
Ata Esener P., Aksöz S., Öztürk E., Maraşlı N.  
Physics Of Metals And Metallography, vol.121, no.14, pp.15-24, 2020 (SCI-Expanded)
- VI. **Effect of Sn contents on thermodynamic, microstructure and mechanical properties in the Zn-90-Bi-10 and Bi-88-Zn-12 based ternary alloys**  
Esener P. A., ALTINTAS Y., Bayram U., ÖZTÜRK E., MARAŞLI N., Aksoz S.  
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.30, no.4, pp.3678-3691, 2019 (SCI-Expanded)
- VII. **Thermophysical properties of NPG solid solution in the NPG-SCN organic system**  
Karadağ S. B., ÖZTÜRK E., Aksöz S., MARAŞLI N.  
Zeitschrift fuer Metallkunde/Materials Research and Advanced Techniques, vol.109, no.3, pp.219-224, 2018 (SCI-Expanded)
- VIII. **Experimental measurements of some thermophysical properties of solid CdSb intermetallic in the Sn-Cd-Sb ternary alloy**  
ÖZTÜRK E., Aksoz S., ALTINTAS Y., Keslioglu K., MARAŞLI N.  
JOURNAL OF THERMAL ANALYSIS AND CALORIMETRY, vol.126, no.3, pp.1059-1065, 2016 (SCI-Expanded)
- IX. **The measurements of electrical and thermal conductivity variations with temperature and phonon component of the thermal conductivity in Sn-Cd-Sb, Sn-In-Cu, Sn-Ag-Bi and Sn-Bi-Zn alloys**  
ALTINTAS Y., Kaygisiz Y., ÖZTÜRK E., Aksoz S., Keslioglu K., MARAŞLI N.  
INTERNATIONAL JOURNAL OF THERMAL SCIENCES, vol.100, pp.1-9, 2016 (SCI-Expanded)
- X. **The Experimental Determination of Interfacial Energies for Solid Zn in Equilibrium with Zn-Al-Sb**

## Liquid

ALTINTAS Y., ÖZTÜRK E., Aksoz S., Keslioglu K., MARAŞLI N.

METALLURGICAL AND MATERIALS TRANSACTIONS B-PROCESS METALLURGY AND MATERIALS PROCESSING SCIENCE, vol.46, no.5, pp.2084-2095, 2015 (SCI-Expanded)

- XI. **Thermal conductivity and interfacial energy of solid Bi in the Bi-Ag eutectic system**  
ALTINTAS Y., ÖZTÜRK E., Aksoz S., Keslioglu K., MARAŞLI N.  
JOURNAL OF THERMAL ANALYSIS AND CALORIMETRY, vol.122, no.1, pp.65-72, 2015 (SCI-Expanded)
- XII. **Experimental determination of interfacial energies for solid Sn in equilibrium with Sn-Mg-Zn liquid**  
ALTINTAS Y., ÖZTÜRK E., Aksoz S., Keslioglu K., Marasli N.  
METALS AND MATERIALS INTERNATIONAL, vol.21, no.2, pp.286-294, 2015 (SCI-Expanded)
- XIII. **The Measurement of Thermal Conductivity Variation with Temperature for Sn-Based Lead-Free Binary Solders**  
Demir M., Aksoz S., ÖZTÜRK E., MARAŞLI N.  
METALLURGICAL AND MATERIALS TRANSACTIONS B-PROCESS METALLURGY AND MATERIALS PROCESSING SCIENCE, vol.45, no.5, pp.1739-1749, 2014 (SCI-Expanded)
- XIV. **The Experimental Determination of Interfacial Energies for Solid Cd in Equilibrium with Sn-Cd-Sb Liquid**  
ÖZTÜRK E., Aksoz S., Keslioglu K., MARAŞLI N.  
METALLURGICAL AND MATERIALS TRANSACTIONS A-PHYSICAL METALLURGY AND MATERIALS SCIENCE, no.3, pp.1161-1170, 2014 (SCI-Expanded)
- XV. **Thermal Conductivity Variation with Temperature for Lead-Free Ternary Eutectic Solders**  
Aksoz N., ÖZTÜRK E., Bayram U., Aksoz S., Kervan S., ÜLGEN A., MARAŞLI N.  
JOURNAL OF ELECTRONIC MATERIALS, vol.42, no.12, pp.3573-3581, 2013 (SCI-Expanded)
- XVI. **Solid-liquid interfacial energy of solid succinonitrile solution in equilibrium with succinonitrile-neopentylglycol eutectic liquid**  
Karadag S. B., Altintas Y., ÖZTÜRK E., Aksoz S., Keslioglu K., MARAŞLI N.  
JOURNAL OF CRYSTAL GROWTH, vol.380, pp.209-217, 2013 (SCI-Expanded)
- XVII. **Measurements of Thermal Conductivity Variations with Temperature for the Organic Analog of the Nonmetal-Nonmetal System: Urea-4-Bromo-2-Nitroaniline**  
Bayram U., ÖZTÜRK E., Aksoz S., Marasli N.  
METALLURGICAL AND MATERIALS TRANSACTIONS A-PHYSICAL METALLURGY AND MATERIALS SCIENCE, no.9, pp.4051-4058, 2013 (SCI-Expanded)
- XVIII. **The measurement of interfacial energies for solid Sn solution in equilibrium with the Sn-Bi-Ag liquid**  
ÖZTÜRK E., Aksoz S., Keslioglu K., Marasli N.  
MATERIALS CHEMISTRY AND PHYSICS, vol.139, no.1, pp.153-160, 2013 (SCI-Expanded)
- XIX. **The measurement of thermal conductivity variation with temperature for Sn-20 wt.% In based lead-free ternary solders**  
ÖZTÜRK E., Aksoz S., Keslioglu K., Marasli N.  
THERMOCHIMICA ACTA, vol.554, pp.63-70, 2013 (SCI-Expanded)
- XX. **The measurement of thermal conductivity variation with temperature for solid materials**  
Aksoz S., ÖZTÜRK E., Marasli N.  
MEASUREMENT, vol.46, no.1, pp.161-170, 2013 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Mechanical and Microstructural Properties of In, Ag, Al Doped Lead-Free Sn-Zn Solder Alloy Systems**  
ÖZTÜRK E.  
Afyon Kocatepe Üniversitesi Fen ve Mühendislik Bilimleri Dergisi, vol.22, pp.477-485, 2022 (Peer-Reviewed Journal)

## Refereed Congress / Symposium Publications in Proceedings

- I. **Solid-liquid interfacial energy and thermodynamic properties of experimentally obtained solid Sn phase in Sn-Mg-Bi ternary alloy system**  
ÖZTÜRK E.  
MAS 16 th INTERNATIONAL EUROPEAN CONFERENCE ON MATHEMATICS, ENGINEERING, NATURAL & MEDICAL SCIENCES, Turkey, 22 February 2022
- II. **SN-ZN-CU LEAD-FREE SOLDER ALLOY SYSTEMS' THERMAL, ELECTRICAL AND MICROSTRUCTURE PROPERTIES**  
ÖZTÜRK E., Esener P. A., AKSÖZ S., MARAŞLI N.  
3rd INTERNATIONAL 5 OCAK CONGRESS ON APPLIED SCIENCES, Turkey, 04 January 2022
- III. **Light dosimetry studies for external laser angioplasty applications of human aortic plaques**  
Kenar N., Öztürk E., Kaçar E., Lim H. S.  
The 43th ASCoF Spring Meeting Valpre-Lyon, France, April 20-22 2019, Lyon, France, 20 - 22 April 2019, pp.21-23
- IV. **Effects of Al, Ag, Sb Elements on Microstructure, Thermal and Mechanical Properties of Zn-Sn-Cu-Bi**  
AKSÖZ S., Esener Ata P., ÖZTÜRK E., MARAŞLI N.  
The Internatinonal Conference on Materials Science Mechanical and Automation Engineerings and Technology (IMSMATEC'18), 10 - 12 April 2018
- V. **Design and Implementation of Optic Tweezer System for Yeast Cell Trapping**  
Karademirci Y., KENAR N., ÖZTÜRK E., KAÇAR E.  
20. Ulusal Optik, Elektro-Optik ve Fotonik Çalıştayı, Ankara, Turkey, 05 September 2018, no.1, pp.119
- VI. **Design and Implementation of Optic Tweezer System for Biological Cell Trapping**  
KARADEMİRCİ Y., KENAR N., ÖZTÜRK E., KAÇAR E.  
Turkish Physical Society 34rd International Physics Congress, Muğla, Turkey, 26 - 30 August 2018, pp.151
- VII. **The Phonon Contribution to the Thermal Conductivity in Sn-Zn-Cu Intermetallic Alloy Systems**  
Esener Ata P., AKSÖZ S., ÖZTÜRK E., MARAŞLI N.  
I.International Scientific and Vocational Studies Congress, 5 - 08 October 2017, pp.472
- VIII. **The Determination of Microstructure, Thermal and Mechanical Properties of Some Intermetallic Alloys in Sn-Zn-Cu System**  
AKSÖZ S., ATA ESENER P., ÖZTÜRK E., MARAŞLI N.  
2nd International Conference on Material Science and Technology in Cappadocia, 11 - 13 October 2017
- IX. **The Measurement of Tensile Strength, DSC, SEM and EDX Properties of Sn-Bi-In-Zn Alternative Lead-Free Solder Alloys**  
ATA ESENER P., AKSÖZ S., ÖZTÜRK E., MARAŞLI N.  
33rd International Physics Congress, 6 - 10 September 2017
- X. **Determination of Thermal Conductivity of Undirectional Solidified Sn Bi In Zn Alternative Lead Free Solder Alloy System s Different Compositions**  
Ata Esener P., AKSÖZ S., ÖZTÜRK E., ALTINTAS Y., KEŞLİOĞLU K., MARAŞLI N.  
Turkish Physical Society 32nd International Physics Congress, Bodrum, Turke, 6 - 09 September 2016
- XI. **Effects of Bi and Zn Elements Microstructures and Thermal Conductivity of Sn Bi Zn Solder**  
Ata Esener P., ALTINTAS Y., BAYRAM Ü., ÖZTÜRK E., AKSÖZ S., KEŞLİOĞLU K., MARAŞLI N.  
Turkish Physical Society 32nd International Physics Congress, Bodrum, Turke, 6 - 09 September 2016
- XII. **THERMAL CONDUCTIVITY AND SOLID LIQUID INTERFACIAL ENERGY OF SOLID Al AND SOLID Si PHASES IN Al Mg Si EUTECTIC TERNARY ALLOY SYSTEM**  
ALTINTAS Y., ÖZTÜRK E., AKSÖZ S., KEŞLİOĞLU K., MARAŞLI N.  
Turkish Physical Society 32nd International Physics Congress, Bodrum, Turkey, 6 - 09 September 2016
- XIII. **Experimental Investigation of Solid Ag Phase in AgSb Binary Eutectic Alloy System**  
ÖZTÜRK E., ALTINTAS Y., AKSÖZ S., KEŞLİOĞLU K.  
32 nd International Physics Congress, Muğla, Turkey, 06 September 2016, pp.104
- XIV. **THE EXPERIMENTAL DETERMINATION OF INTERFACIAL ENERGIES FOR SOLID Zn IN EQUILIBRIUM WITH Zn Al Sb LIQUID**

AKSÖZ S., ALTINTAS Y., ÖZTÜRK E., KEŞLİOĞLU K., MARAŞLI N.

International Conference on Material Science and Technology in Cappadocia (IMSTEC'16), NEVŞEHİR, TÜRKİYE, 6 - 08 April 2016, pp.1115

- XV. **EXPERIMENTAL MEASUREMENTS OF SOME THERMOPHYSICAL PROPERTIES OF SOLID CDSB INTERMETALLIC IN THE SN CD SB TERNARY ALLOY**  
AKSÖZ S., ÖZTÜRK E., ALTINTAS Y., KEŞLİOĞLU K., MARAŞLI N.  
International Conference on Material Science and Technology in Cappadocia (IMSTEC'16), NEVŞEHİR, TÜRKİYE, 6 - 08 April 2016, pp.1116
- XVI. **The measurements of electrical and thermal conductivity variations with temperature and phonon component of the thermal conductivity in the In Bi intermetallic alloys**  
AKSÖZ S., Ata P., BAYRAM Ü., ALTINTAS Y., ÖZTÜRK E., KEŞLİOĞLU K., MARAŞLI N.  
9 th International Physics Conference of the Balkan Physical Union 24-27 August, İstanbul University, İstanbul / Turkey, 24 - 27 August 2015, pp.142
- XVII. **The experimental determination of interfacial energies for solid Sn in equilibrium with Sn Mg Zn liquid**  
ÖZTÜRK E., ALTINTAS Y., AKSÖZ S., KEŞLİOĞLU K., MARAŞLI N.  
9 th International Physics Conference of the Balkan Physical Union 24-27 August, İstanbul University, İstanbul, 24 - 27 August 2015, pp.256
- XVIII. **Thermal Conductivity Of Sn Based Ternary Solders**  
ALTINTAS Y., ÖZTÜRK E., AKSÖZ S., KEŞLİOĞLU K., MARAŞLI N.  
31. International Physics Congress, MUĞLA, TURKEY, 21 - 24 July 2014
- XIX. **Thermal Conductivity And Interfacial Energy Of Solid Bi In The Bi Ag Eutectic System**  
ALTINTAS Y., ÖZTÜRK E., AKSÖZ S., KEŞLİOĞLU K., MARAŞLI N.  
31. International Physics Congress, MUĞLA, TURKEY, 21 - 24 July 2014
- XX. **The measurement of thermal conductivity variation with temperature for Sn 20wt In based lead free ternary solders**  
AKSÖZ S., ÖZTÜRK E., KEŞLİOĞLU K., MARAŞLI N.  
Advanced Materials World Congress, İzmir, Turkey, 16 September 2013, pp.227
- XXI. **Solid liquid interfacial energy of solid succinonitrile solution in equilibrium with succinonitrile neopentylglycol eutectic liquid**  
ALTINTAS Y., Karadağ S. B., ÖZTÜRK E., AKSÖZ S., KEŞLİOĞLU K., MARAŞLI N.  
Advanced Materials World Congress, İzmir, Turkey, 16 September 2013, pp.186
- XXII. **The experimental Determination of interfacial energies for solid Cd in equilibrium with Sn Cd Sb liquid**  
ÖZTÜRK E., AKSÖZ S., KEŞLİOĞLU K., MARAŞLI N.  
Advanced Materials World Congress, İzmir, Turkey, 16 September 2013, pp.226
- XXIII. **Solid liquid interfacial energy of solid neopentylglycol solution in equilibrium with succinonitrile neopentylglycol eutectic liquid**  
ALTINTAS Y., Karadağ S. B., ÖZTÜRK E., AKSÖZ S., KEŞLİOĞLU K., MARAŞLI N.  
Turkish Physical Society 30th International Physics Congress, İstanbul, Turkey, 02 September 2013, pp.92
- XXIV. **The Measurement of İnterfacial Energies For Solid Sn Solution In Equilibrium With The Sn Bi Ag Liquid**  
ÖZTÜRK E., AKSÖZ S., KEŞLİOĞLU K., MARAŞLI N.  
Turkish Physical Society 29th International Physics Congress, Muğla, Turkey, 05 September 2012, pp.505
- XXV. **The Measurement of Thermal Conductivity Variation With Temperature For Solid Materials**  
BAYRAM Ü., AKSÖZ S., ÖZTÜRK E., MARAŞLI N.  
Turkish Physical Society 29th International Physics Congress, Muğla, Turkey, 05 September 2012, pp.544
- XXVI. **Novel experimental technique to determine the variation of thermal conductivity with temperature**  
ÖZTÜRK E., AKSÖZ S., MARAŞLI N.  
Turkish Physical Society 28th International Physics Congress, Muğla, Turkey, 06 September 2011, pp.620
- XXVII. **Thermal and electrical conductivity of zinc antimony alloys**

ÖZTÜRK E., AKSÖZ S., MARAŞLI N.

Turkish Physical Society 28th International Physics Congress, Muğla, Turkey, 06 September 2011, pp.621

**XXVIII. Preparation of SiO<sub>2</sub> TiO<sub>2</sub> Thin Films and Investigating the Microstructural Properties**

ÖZTÜRK A., HOŞCAN M., uluadaoğlu E., KANDEMİRLİ F., KABALCI İ.

Turkish Physical Society 27th International Physics Congress, İstanbul, Turkey, 14 September 2010

**XXIX. Elaboration and Optical Characterization of SiO<sub>2</sub> TiO<sub>2</sub> Thin Films**

ÖZTÜRK A., HOŞCAN M., uluadaoğlu E., KANDEMİRLİ F., KABALCI İ.

Turkish Physical Society 27th International Physics Congress, İstanbul, Turkey, 14 September 2010

**XXX. Thermal And Electrical Conductivities Of Al Bi Zn Alloys**

yıldız f., AKSÖZ S., Ocak Y., uluadaoğlu E., KEŞLİOĞLU K., MARAŞLI N.

Turkish Physical Society 27th International Physics Congress, İstanbul, Turkey, 14 September 2010, pp.706

**XXXI. Preparation of Co Mn Nd Doped SiO<sub>2</sub> Thin Films and Investigation the Microstructural Properties**

HOŞCAN M., uluadaoğlu E., KANDEMİRLİ F., KABALCI İ.

7th. International Conference of the Balkan Physical Union, Alexandroupoli, Greece, 09 September 2009, vol.1203, pp.217-222

**XXXII. Bent Rule: Theoretical studies of nonmetal fluorides**

Kandemirli F., Hoscan M., Ozturk A., Uluadaoglu E.

6th International Conference of the Balkan-Physical-Union, İstanbul, Turkey, 22 - 26 August 2006, vol.899, pp.563

## Supported Projects

KAÇAR E., KENAR LIM N., ÖZTÜRK E., LIM H. S., Project Supported by Higher Education Institutions, BİYOLOJİK HÜCRELERİN TUZAKLANMASI VE MANİPÜLASYONU İÇİN BİLGİSAYAR KONTROLLÜ OPTİK CİMBİZ SİSTEMİNİN TASARIMI VE GERÇEKLENMESİ, 2017 - 2022

## Scientific Refereeing

SOLDERING AND SURFACE MOUNT TECHNOLOGY, SCI Journal, December 2023

SOLDERING AND SURFACE MOUNT TECHNOLOGY, SCI Journal, November 2023

SOLDERING AND SURFACE MOUNT TECHNOLOGY, SCI Journal, May 2023

SOLDERING AND SURFACE MOUNT TECHNOLOGY, SCI Journal, October 2022

SOLDERING AND SURFACE MOUNT TECHNOLOGY, SCI Journal, August 2022

TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, SCI Journal, July 2017

## Metrics

Publication: 53

Citation (WoS): 99

Citation (Scopus): 107

H-Index (WoS): 6

H-Index (Scopus): 6

## Non Academic Experience

Universite Paris 13 Nord Institut Galilee